

## DELIVERABLE D1



# European Research Infrastructures Development Watch (ERID-Watch)

## Good practices Benchmarking specifications report - WP1 Terms of Reference -

### Executive Summary

Within ERID-Watch WP 1 is responsible for the task of benchmarking and good practises selection. D1 is the first Deliverable of WP1. Following the fields which are tackled in the D1 document and the attachments (D1-1 - D1-7) of the D1 document are summarised:

The chapter “Definition and selection of RI Sites to be benchmarked” explains which and how many RIs will be selected for the interviews (see provisional RI sample D1-1). As a result about 70 RIs from a population of more than 800 RIs in Europe are planned to be interviewed by ERID-Watch’s WP1.

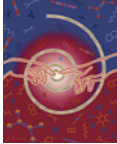
Subsequently the “Activity fields to be benchmarked” as derived from the description of work (DOW) and main results of the debate within the WP1 Pilot Group are listed. Know-how and technology transfer, sub-contracted tasks to industry, financial partnership, human mobility and resources as well as the legal environment constitute the focus of WP1. The questionnaire documents are attached (see D1-4 & D1-5).

In the chapter “Methodology” first the “structure of work” of WP1 is explained. But the main issue of this chapter is the illustration of the shifting aims and sub-tasks of the project from the Preliminary Phase (till February 2007) via Phase 1 (till September 2007) to Phase 2 (in the second year). The members of the Pilot Group are named (see D1-2) and a scheme for the various interfaces and feedbacks is presented (see D1-3).

Under the heading “Industrial Companies to be contacted” the basic motives to contact industrial partners are shown. The differentiation sees three basic types of industrial companies: industrial users of a RI services, suppliers of goods or services to a RI and technological partners of a RI. The preliminary industrial companies contact list is attached to this deliverable (D1-6).

The chapter “Template for the Midterm Report” outlines structure and content of Deliverable D2, whilst the template itself is attached (see D1-7). Starting with a description of scope and methodology of the survey and followed by a summarisation of the general information about interviewed RIs, the main body of D2 will consist of a classification of the legal environment and a ranking or clustering of several key figures (TT, PPP, cross-cutting activities). This will be concluded by a perspective for the second year of ERID-Watch. As a basic rule D2 should mainly report and classify facts gathered during interviews and accompanying investigation, thus providing a solid basis for the rounding off of the survey and the conclusions and recommendations required in the second year.

The final chapter “Input and interface relationship” exemplifies relationships to the other ERID-Watch bodies and details the strong connection between these bodies.



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### 1. Definition and selection of RI-sites to be benchmarked

The 2005 EU survey listed as the result of a survey in 2004 and 2005 742 Research Infrastructures (585 existing and 157 under construction). This means that we handle a **population of about 800 RIs** in Europe.

Within the given time it is only possible to evaluate a part of all listed RIs. Taking into account time and budget the scope has to be limited to certain criteria.

EC defines as RI "1. Research Infrastructures (RI) should provide, to the scientific community, essential services needed for the performance of leading edge research, of basic or applied character. RI should be open to researchers, i.e. provide access to researchers and users from other countries.

2. Research Infrastructures should normally represent a total cumulative investment (for the construction of the Research Infrastructure) of more than 20 Mio € (today's equivalent)."

Another criterion for WP1's sample of RIs is the clear European dimension in the work of the RI as well as the appropriate number of users compared to staff of the RI (more than an average of 20% external users). At this point a **perimeter of about 200 RI** remains for the study.

A possible **sample of the first year is 70 RIs** to evaluate. The sample is chosen according to:

#### 1. Scientific domain of the ~200 RI

- sectioned according to ESFRI Roadmap definitions
- roughly proportional to the percent value in the Perimeter

#### 2. Country

- if possible from all 27 EU members/3 candidates/5 associates
- sense of proportion in choice of RIs
- only very interesting/large RIs from countries with few RIs

#### 3. Type of RI

- Single-sited (single resource at a single location) 86,92%
- Distributed (including Grid-Type architectures) 6,89%
- Virtual (a service being provided electronically) 6,89%

(See **D0** for further details.)

The criteria for the WP1 sample were discussed in ERID-Watch bodies, i.e. the Executive Board and the WP1 Pilot Group. Feedback of the WP1 Pilot Group was included, for example that

- all ESFRI scientific categories should be represented in the first round of interviews;
- not the same type of RI should be interviewed twice in the first part of the sample,
- the ESFRI roadmap RIs with substantial pre-existing research and investment should be interviewed by WP1 as well because they have their roots mainly in already existing RIs and they have experience and also best practise examples.

The investigations will start in priority in the form of face to face interviews with the following RI:

- 1.a. EIROFORUM: ESA, ESO, ESFR, EFDA, CERN, ILL, EMBL  
1.b ERF: DESY, CCLRC, Elletra, FOM, GANIL, GSI, HMI, Laserlab Europe, Max-Lab, PSI, Soleil  
2. Expert partners of ERID-Watch according to the Sample definition  
3. Other RIs according to the Sample definition  
(4. Further RI – extended Sample2).

The planned sample is attached to this document, but, at the moment not all RIs are contacted and asked if they are willing to participate. This means that some RIs listed in the sample could be replaced by similar RIs. See annex **D1-1** for details about the sample for the first phase of WP1's work in the year 2007. The sample for phase 2 will be set in time based on the findings and conclusions from the first phase and will finally be adjusted taking into account the discussions around the MTR.

## **2. Activity fields to be examined**

Work package 1 -the Benchmarking activities and good practises selection- consists of an evaluation of the profile of the European Research Infrastructures. According to the Description of Work of the ERID-Watch project the following objectives should be regarded during analysis:

Best practises should be identified and benchmarked in the area of

- know-how and technology transfer (Classical TT, IP Management, Cooperation contracts)
- sub-contracted tasks to industry
- financial partnership (as, for example, public-private partnerships)
- human mobility and resources
- Legal environment in all areas described.

As result of this evaluation conclusions will be drawn in phase 1 which will finally lead to policy recommendations in phase 2, including the identification of relevant cross-cutting technologies and emerging potentials for identifying inter alia *domains to support*.

The Pre-Questionnaire as well as the face to face Interviews try to touch all different areas and gather the required basic information. Details about the covered items will be found in the aforementioned questionnaires (see annexes **D1-4** and **D1-5**).

## **3. Methodology**

### **a. Structure of work**

All basic work is carried out by Katharina Henjes-Kunst, the project scientist for WP1, in close co-ordination with the working level of WP2, consisting mainly of BEM and QI3. The WP1 Pilot Group (see annex **D1-2**) is in the first line of being involved in all definitions and the general evaluation processes. Following all draft papers are then commented upon by the other project's bodies, namely Industrial Group, Advisory Committee and Mirror Group. Finally, the Executive Board decides upon the completion of publications. This whole process is overseen and coordinated by Dr. Karsten Wurr, the leader of WP1. (See annex **D1-3**.)

The work of WP1 is structured in one preliminary and two working phases:

- Preliminary Phase: Scope & Definition
- 1<sup>st</sup> Phase: Broad Survey & Facts Report & Basic Conclusions
- 2<sup>nd</sup> Phase: Refining of data & Recommendations

### **b. Preliminary Phase**

The preliminary phase till February 2007 was basically concerned with the process of defining the sample as well as the scope of the survey, building of theories and defining the structure for the subsequent analysis. During this phase WP1 was centrally involved in shaping D0, which served as a

starting point for the preparation of the present D1. The constitutive Pilot Group meeting on February 7<sup>th</sup> in Hamburg delivered substantial input to the whole process.

### **c. Phase 1**

Phase 1 of WP1's work (March until September 2007) will concentrate on a broad evaluation of existing RIs with face-to-face interviews of RI representatives. Further information could be retrieved by telephone. For this, several documents have been prepared:

- 1) A Pre-Questionnaire, which asks for mainly figures in the area of TT (number of patent applications ...), Human Resources (number of employee ...) from the institution and any belonging Infrastructures (see annex **D1-4**). This Pre-questionnaire is send to the contact person in the institution and should be filled in and sent back before the face to face interview. The results are important for the preparation of the face to face interviews.
- 2) An Interview Guideline is prepared as guideline for the following face to face interview of appr. 2 hours at the institution (see annex **D1-5**). This partition in two questionnaires was made by recommendation of the WP1 Pilot Group. First it was only one questionnaire planned asking all questions at the face to face interview but questions about the timeframe and if one person could answer the questions arose.

Main aim of the face to face interview is to gather qualitative data in all relevant fields of activity (see 2. above). It was accorded at the WP1 Pilot Group Meeting that there should be a central focus on the issues of know-how transfer and human resources. The finance issue should be investigated with less effort under WP1, as it is more a domain of WP2, whilst the legal environment should be regarded as subpart of all other issues. For the Midterm Report additional materials of the interviewed institutions and their infrastructures (e.g. the annual reports) will be collected and used as additional data source. This report will summarise the results of the interviews and contain first basic conclusions as well as recommendations for the further work of WP1, as specified below (see 5. and annex **D1-7**).

### **d. Phase 2**

Contents and schedule of Phase 2 will finally be set according to the findings during Phase 1 after the MTR. Focus and means of this phase will be chosen to find the optimal balance between the available resources of the project and its manifold ambitious goals. The general aim of this phase will be to broaden and to refine the available data, to find out and verify characteristic key figures and important parameters and processes. For this purpose further interviews and/or case studies will be held with a. the RIs from Phase 1, b. other RIs, c. industrial companies (see 4. below and annex **D1-6**), d. other RI stakeholders like users, cooperating universities, governmental bodies etc. The option of an additional - may be web-based - questionnaire, addressed at a broad range of participating RIs, but with a smaller set of key figures and facts, is currently considered for Phase 2. In case that such a broad additional survey is aimed at, additional resources will for sure be required.

### **e. Current status**

By now the trial phase of the face to face interviews is running. Now we have conducted interviews with four institutions, including 7 existing and planned infrastructures. Interviews with at least three more institutions are planned for March. After a revision by the WP 1 Pilot Group in the beginning of April the second round of interviews will be done until July with a somehow revised questionnaire. July is scheduled for analysis of the results. As the Intermediate Benchmarking Report is due in September the results of the interviews as well as a first draft of the report have to be discussed in the end of July/beginning of August with the Pilot Group to provide a draft report for the other bodies (see annex **D1-3**).

## **4. Industrial companies to be contacted**

Industrial companies form a large and important group amongst the stakeholders of any RI. According to their relation they might be divided in three sub-groups, although each single company may be part of any of these groups:

- Industrial users of the RI's services

- Suppliers of goods and services to the RI
- Technological partners of the RI (as licensee, licensor or co-operation partner)

WP1 has decided to start its work with a survey and an evaluation of the RIs themselves and to shift the focus to the RI's stakeholders, including industry, in Phase 2. This has the advantage to gather reliable pre-information about industrial companies being related to RIs quite easily without much effort during Phase 1. Naturally, the industrial expert partners will be considered in the first line as contacts and interview partners for this process. Thus, the attached list of companies already involved in the project (see annex **D1-6**) will serve as a nucleus for the final list of industrial contacts.

## **5. Template for the midterm report**

This template for the Midterm Report (see annex **D1-7**) will provide a basic structure and key points as regards contents for D2. Consequently the items of the report will have to meet the following requirements:

- Explain briefly scope, intention and methodology of Phase 1.
- Summarise general information on the sample of the survey, i.e. interviewed RIs.
- List and classify information on the legal environment.
- First summarise and classify than exemplify and finally rank or cluster and evaluate, if applicable, key figures, basic information and neat examples each for
  - know-how and technology transfer
  - public private partnership
  - cross-cutting activities.
- Provide a perspective for Phase 2 of the Project.

The analysed areas are handled quite differently within the large variety of RIs, which are subjected to this survey. E.g., Know-How and Technology Transfer is organised very different as well as it has an unequal significance for several institutions. For the Midterm Report it is planned to present several clusters, which are built from questions as: How is Know-How and Technology Transfer organised?; What role plays Know-How and Technology Transfer in the institution?; Numbers of IP....The clusters will be explained in the midterm report and some examples will be introduced. This method will lead to an advanced theory building for the final report D3.

## **6. Input and interface relationship**

A strong connection with all ERID-Watch work packages and bodies exists. The collaboration works through different meetings (e.g. WP1 and WP2 operative employees), e-mail contacts and telephone conferences (e.g. of the Executive Board). The attached annex **D1-3** shows the working relations among the different ERID-Watch bodies schematically.

The WP1 Pilot Group with all different backgrounds and experiences of the group members is strongly integrated in the process of defining and lay-outing the WP1. They meet at every important point of the process, especially before setting up the questionnaire, after the trial phase and before the Midterm Report is published. Moreover, for all WP1 meetings persons from the other ERID-Watch bodies are warmly welcome to give their input.

At the moment WP1 is testing the practical aspects of the collaboration with the WP2. Both work packages try to conduct the interviews jointly, i.e. they are either held by two interviewers – one being from each work package – or WP 1 asks in addition to its own set of questions those from WP2 during the face to face interviews and vice versa. By that it is aimed at maximising the results of ERID-Watch whilst staying in the borders of the project's budget.

With WP3 a strong connections exists because this work package is concerned with the dissemination of the results. The WP1 leader and the project scientist are in close contact with the WP3 leader and are regularly involved in the activities of the WP3 pilot group.

Finally, draft results will be commented upon by the Advisory committee and will be approved by the Industrial Group and the Mirror Group before the Executive Board hands over any Deliverable to the EC.